

Amendment Under 37 C.F.R. § 1.111
U.S. Appl. No.: 10/052,395

Attorney Docket # Q68219

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Original) A structure for preventing failure of a connector including a first subconnector and a second subconnector comprising:

an openable and closable cap provided at a front end portion of said first subconnector for closing said front end portion;

a cap lock provided on a connector housing of said first subconnector for preventing a turning of said cap when said first subconnector is not fitted into said second subconnector; and

a disengaging mechanism provided in at least one of said first and second subconnectors for disengaging said second subconnector from said first subconnector in a case that a predetermined force acts in a disengaging direction after completion of fitting said first subconnector into said second subconnector, whereby the failure of said connector is prevented.

2. (Original) The structure for preventing failure of the connector according to claim 1, wherein said disengaging mechanism includes a relief groove provided in said cap lock serving as a fitting lock for locking said second subconnector when said first subconnector and said second subconnector are fitted into each other after completion of fitting therebetween and said relief groove is formed in a support portion of said cap lock engaged with a cap lock shaft turnably supporting said cap lock.

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3. (Original) A subconnector adapted to be fitted to a mate subconnector comprising:
an openable and closable cap provided at a front end portion of said subconnector for closing said front end portion;
a cap lock provided on a connector housing of said subconnector for preventing a turning of said cap when said subconnector is not fitted into said mate subconnector, said cap lock serving as a fitting lock for locking said mate subconnector when said subconnector is fitted to said mate subconnector;
a cap lock shaft engaged with a support portion of said cap lock so as to turnably support said cap lock; and
a relief groove provided in said support portion of said cap lock, and
wherein said relief groove disengages said cap lock shaft from said support portion in a case that a predetermined force acts in a disengaging direction of said subconnector and said mate subconnector.

4. (New) A structure for preventing failure of a connector including a first subconnector and a second subconnector comprising:
an openable and closable cap provided at a front end portion of said first subconnector for closing said front end portion;
a cap lock provided on a connector housing of said first subconnector for preventing a turning of said cap when said first subconnector is not fitted into said second subconnector, and

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a disengaging mechanism provided in at least one of said first and second subconnectors for disengaging said second subconnector from said first subconnector in a case that a predetermined force acts in a disengaging direction after completion of fitting said first subconnector into said second subconnector, whereby the failure of said connector is prevented, wherein:

said disengaging mechanism includes a relief groove provided in said cap lock serving as a fitting lock for locking said second subconnector when said first subconnector and said second subconnector are fitted into each other after completion of fitting therebetween; and

said relief groove is formed in a support portion of said cap lock engaged with a cap lock shaft turnably supporting said cap lock.

5. (New) The structure for preventing failure of the connector according to claim 2, wherein a lock accommodating portion for engaging an end portion of the cap lock is provided in a side surface portion of the second subconnector.

6. (New) A subconnector adapted to be fitted to a mate subconnector according to claim 3, wherein a lock accommodating portion for engaging an end portion of the cap lock is provided in a side surface portion of the mate subconnector.

7. (New) The structure for preventing failure of the connector according to claim 4, wherein a lock accommodating portion for engaging an end portion of the cap lock is provided in a side surface portion of the second subconnector.

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8. (New) The structure for preventing failure of the connector according to claim 2, wherein the cap lock has a generally hook-shaped cross section.

9. (New) A subconnector adapted to be fitted to a mate subconnector according to claim 3, wherein the cap lock has a generally hook-shaped cross section.

10. (New) The structure for preventing failure of the connector according to claim 4, wherein the cap lock has a generally hook-shaped cross section.

11. (New) The structure for preventing failure of the connector according to claim 2, wherein the cap lock has a width that extends across a substantial portion of the first subconnector.

12. (New) A subconnector adapted to be fitted to a mate subconnector according to claim 3, wherein the cap lock has a width that extends across a substantial portion of the subconnector.

13. (New) The structure for preventing failure of the connector according to claim 4, wherein the cap lock has a width that extends across a substantial portion of the first subconnector.